

What is claimed is:

1. A liquid crystal display device comprising:

a liquid crystal cell comprised of a first substrate and a second substrate, each transparent, disposed with a predetermined spacing so as to oppose each other, and a liquid crystal layer sealed in a gap formed therebetween, capable of exerting optical changes on incident light by applying a voltage to the liquid crystal layer;

a first polarizer installed on an outer side of the first substrate disposed on a visible side of the liquid crystal cell;

a second polarizer installed on an outer side of the second substrate disposed on a side of the liquid crystal cell, opposite from the visible side thereof; and

an auxiliary light source disposed on a side of the second polarizer, opposite from the liquid crystal cell,

wherein the first polarizer is a polarizer allowing a first linearly polarized light component to pass therethrough,

the second polarizer is a polarizer reflecting a second linearly polarized light component while allowing a third linearly polarized light component vibrating in a direction orthogonal to a direction of vibration of the second linearly polarized light component to pass therethrough,

a third polarizer allowing a fourth linearly polarized light component to pass therethrough is disposed between the second polarizer and the auxiliary light source, and

an intersecting angle formed by the direction of vibration of the third linearly polarized light component and that of the fourth linearly polarized light component is in a range of minus 45 degrees to plus 45 degrees.

2. A liquid crystal display device according to claim 1, wherein the third

polarizer is an absorption-type polarizer allowing the fourth linearly polarized light component to pass therethrough while absorbing a fifth linearly polarized light component vibrating in a direction orthogonal to the direction of vibration of the fourth linearly polarized light component.

5           3. A liquid crystal display device according to claim 1, wherein the third polarizer is a reflection-type polarizer allowing the fourth linearly polarized light component to pass therethrough while reflecting a fifth linearly polarized light component vibrating in a direction orthogonal to the direction of vibration of the fourth linearly polarized light component.

10           4. A liquid crystal display device according to claim 1, wherein the auxiliary light source is a backlight device making use of a cold cathode tube.

            5. A liquid crystal display device according to claim 1, wherein the auxiliary light source is a backlight device making use of a light emitting diode.

15           6. A liquid crystal display device according to claim 1, wherein the auxiliary light source is a backlight device making use of an electroluminescent device.

            7. A liquid crystal display device according to claim 1, wherein the third polarizer is bonded to the second polarizer.

20           8. A liquid crystal display device according to claim 1, wherein the third polarizer is fixedly attached to the auxiliary light source or a constituting member thereof, and is separated from the second polarizer.

            9. A liquid crystal display device according to claim 1, wherein an optical scattering layer is installed at any suitable position on a visible side of the second polarizer.

25           10. A liquid crystal display device comprising:  
            a liquid crystal cell comprised of a first substrate and a second substrate, each transparent, disposed with a predetermined spacing so as to oppose each

other, and a liquid crystal layer sealed in a gap formed therebetween, capable of exerting optical changes on incident light by applying a voltage to the liquid crystal layer;

5 a first polarizer installed on an outer side of the first substrate disposed on a visible side of the liquid crystal cell;

a second polarizer installed on an outer side of the second substrate disposed on a side of the liquid crystal cell, opposite from the visible side thereof; and

10 an auxiliary light source disposed on a side of the second polarizer, opposite from the liquid crystal cell,

wherein the first polarizer is a polarizer allowing a first linearly polarized light component to pass therethrough,

15 the second polarizer is a polarizer reflecting a second linearly polarized light component while allowing a third linearly polarized light component vibrating in a direction orthogonal to a direction of vibration of the second linearly polarized light component to pass therethrough,

a third polarizer allowing a fourth linearly polarized light component to pass therethrough is disposed between the second polarizer and the auxiliary light source,

20 an optical semi-absorption layer is disposed at any of positions between the second polarizer and the third polarizer, between the third polarizer and the auxiliary light source, and between constituents of the auxiliary light source, and

25 the direction of vibration of the third linearly polarized light component substantially coincide with that of the fourth linearly polarized light component.

11. A liquid crystal display device according to claim 10, wherein the third polarizer is an absorption-type polarizer allowing the fourth linearly

polarized light component to pass therethrough while absorbing a fifth linearly polarized light component vibrating in a direction orthogonal to the direction of vibration of the fourth linearly polarized light component.

12. A liquid crystal display device according to claim 10, wherein the  
5 third polarizer is a reflection-type polarizer allowing the fourth linearly polarized light component to pass therethrough while reflecting a fifth linearly polarized light component vibrating in a direction orthogonal to the direction of vibration of the fourth linearly polarized light component.

13. A liquid crystal display device according to claim 10, wherein the  
10 auxiliary light source is a backlight device making use of a cold cathode tube .

14. A liquid crystal display device according to claim 10, wherein the auxiliary light source is a backlight device making use of a light emitting diode.

15. A liquid crystal display device according to claim 10, wherein the auxiliary light source is a backlight device making use of an electroluminescent  
15 device.

16. A liquid crystal display device according to claim 10, wherein the third polarizer is bonded to the second polarizer.

17. A liquid crystal display device according to claim 10, wherein the third polarizer is fixedly attached to the auxiliary light source or a constituting  
20 member thereof, and is separated from the second polarizer.

18. A liquid crystal display device according to claim 10, wherein the optical semi-absorption layer has a uniform absorption characteristic substantially in an entire visible light region and absorptivity thereof is 60% or less.

19. A liquid crystal display device according to claim 10, wherein an  
25 optical scattering layer is installed at any suitable position on a visible side of the second polarizer.